

US009510896B2

(12) United States Patent Sims et al.

Sims et al.

(54) SURGICAL FORCEPS

(71) Applicant: Covidien LP, Mansfield, MA (US)

(72) Inventors: **Grant T. Sims**, Littleton, CO (US);

Chase Collings, Hayden, ID (US); Jeffrey R. Townsend, Longmont, CO

(US)

(73) Assignee: COVIDIEN LP, Mansfield, MA (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

This patent is subject to a terminal dis-

claimer.

(21) Appl. No.: 14/721,088

(22) Filed: May 26, 2015

(65) Prior Publication Data

US 2015/0250527 A1 Sep. 10, 2015

Related U.S. Application Data

- (63) Continuation of application No. 13/179,975, filed on Jul. 11, 2011, now Pat. No. 9,039,732.
- (51) **Int. Cl.**A61B 18/14 (2006.01)

 A61B 17/285 (2006.01)

 (Continued)
- (52) **U.S. Cl.** CPC *A61B 18/1442* (2013.01); *A61B 17/285* (2013.01); *A61B 2017/2825* (2013.01);

(Continued) Field of Classification Search

CPC A61B 18/1442; A61B 2018/0063; A61B 2018/1455; A61B 2018/1495

See application file for complete search history.

(10) Patent No.: US 9,510,896 B2

(45) **Date of Patent:** *Dec. 6, 2016

(56) References Cited

U.S. PATENT DOCUMENTS

D249,549 S 9/1978 Pike D263,020 S 2/1982 Rau, III (Continued)

FOREIGN PATENT DOCUMENTS

CN 2659367 Y 12/2004 CN 101184445 A 5/2008 (Continued)

OTHER PUBLICATIONS

Int'l Search Report EP 04027705.5 dated Feb. 3, 2005. (Continued)

Primary Examiner — Jocelyn D Ram

(57) ABSTRACT

A forceps includes first and second shaft members each having a jaw member disposed at a distal end thereof. One (or both) of the first and second jaw members is moveable relative to the other between a spaced-apart position and an approximated position for grasping tissue therebetween. The first jaw member includes a jaw frame fixedly engaged to the first shaft member and a disposable jaw housing releasably engageable with the jaw frame. The disposable jaw housing includes a knife assembly disposed therein. The knife assembly includes a knife blade biased toward an initial position, wherein the knife blade is disposed within the jaw housing. The knife blade is moveable between the initial position and an extended position, wherein the knife blade extends at least partially from the jaw housing to cut tissue grasped between the first and second jaw members.

17 Claims, 9 Drawing Sheets

